

IX. — On some Tipulidæ (Limoniinæ) from Ceylon in the British Museum Collection, with Descriptions of Eight new Species. By F. W. EDWARDS, B.A.

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THE insects treated of in this paper were contained in three collections made in Ceylon and presented by the collectors to the British Museum :—

- (1) Mr. E. E. Green's collection, made between 1888 and 1897.
- (2) Lt.-Col. J. W. Yerbury's collection, made in 1890-92.
- (3) Mr. T. Bainbrigge Fletcher's collection, made in 1907-8.

Only the insects belonging to the subfamily Limoniinæ (*Tipulidæ brevipalpi*, O.-S., *Limnobiidæ*, auctt.) are here described. These all belong to widely distributed genera, but many of the species are of considerable interest. The occurrence of the genus *Styringomyia* in this region is interesting; it seems to have a very wide range in the tropics of the Old World.

Of the sixteen species represented in the three collections, eight are here described as new, while of the remaining eight only four (*Eriocera crystalloptera*, *E. humberti* and *E. albo-notata*, and *Conosia irrorata*) had previously been recorded from Ceylon. The species of *Eriocera*, as has been noticed before, vary to a rather remarkable extent, particularly in their neuration.

1. *Thrypticomyia saltens*, Dol. Natuurk. Tijdschr. Ned. Ind. xiv. p. 390, pl. ii. fig. 3 (1857) (as *Limnobia*).

Syn. *Dicranomyia saltans*, Ost.-Sack. Berl. ent. Zeit. 1882, p. 88.

Although there are marked differences between this species and *T. auripennis* in the neuration, it is here referred without any hesitation to the genus *Thrypticomyia*. In the structure of the antennæ, and the shape of the wings and abdomen, there is hardly any divergence; these three characters I regard as the essential ones of the genus.

As the original description was rather short, and in Dutch, I append another :—

*Antennæ* 14-jointed, but the last joint constricted in the middle, so that they appear almost as though they were

15-jointed; bristles very similar to *T. awipennis*; slightly shorter than thorax. *Thorax* ochreous brown (♂) or dark brown (♀), of the characteristic subglobular shape. *Legs* very long and thin, dark fuscous; coxæ ochreous in male; apical  $\frac{3}{5}$  of metatarsi white, the last four joints white, tinged with reddish ochreous in the male; metatarsi three times as long as the remaining four joints together, those of the front legs somewhat longer than those of the other two pairs. *Wings* hyaline, with coppery reflections; stigma distinct, about twice as long as broad; cells round the apex very short; the præfurca springs from the first vein beyond  $\frac{1}{8}$  of the wing's length; auxiliary vein terminates at about  $\frac{2}{3}$ , with the subcostal cross-vein at its tip; marginal cross-vein slightly beyond middle of stigma, at the tip of the first vein, which tip being bent up to the costa, there is no supernumerary cross-vein; axillary terminates slightly beyond tip of auxiliary. *Halteres* very long (about equal in length to the whole thorax), blackish, base of stalk in male ochreous. *Abdomen* brown, much narrowed at base in both sexes; fleshy lobes of male genitalia unusually long.

Length of body 9 mm.; wing 9 mm. Doleschall gives the length as  $2\frac{1}{2}'''$ , but indicates the correct length ( $4'''$ ) in his figure.

In connection with the peculiar habits of a species of this genus in the Seychelles Islands, noticed by Mr. Hugh Scott in *Trans. Linn. Soc.* xiv. part 1, p. 32, it is interesting to find a reference to the habits of *T. saltens*. Osten-Sacken states that, according to Doleschall, "It is often found in dwellings, principally in the corners, in large numbers, dancing up and down in the air; they keep so close together that they seem to hold each other in dancing, and to form a regular chain." In view of Scott's interesting discovery, which he says required close and careful observation to find out, *i. e.* that the Seychelles species hangs in chains from fine web-threads, it seems possible that *T. saltens* uses cobwebs in the corners of rooms for a similar purpose.

*Hab.* Uva P. Madulsima, 25. v. 1908, 1 ♂ and 1 ♀ (*T. Bainbrigge Fletcher*).

## 2. *Thrypticomys longivena*, sp. n., ♀.

Ochracea, alis hyalinis, tarsi pedum posteriorum albis; vena mediastinali post ortu præfurcæ in costa terminata.

*Head*: antennæ brownish, slightly longer than thorax; 14-jointed, last joint with the apical half narrower, so that it has the appearance of being divided. Joints of flagellum

strikingly pedicellate, the glabrous pedicels occupying from  $\frac{1}{3}$  to  $\frac{1}{2}$  the length of the joint, and being only  $\frac{1}{4}$  as broad as the broadest part; broad portion more or less conical, the apex of the cone being towards the base of the joint; these broad portions are provided with a verticel of fine hairs, three or four shorter bristles and one longer dorsal bristle, the hairs being  $\frac{2}{3}$ , the shorter bristles about  $1\frac{1}{2}$  and the longer about  $2\frac{1}{2}$  times as long as the breadth of the conical portion of the joint. *Thorax* ochreous, mesonotum with a rather broad dark brown central stripe reaching back to the suture. *Legs* rather dark brown, coxæ and femora towards base ochreous, posterior tarsi and apical fifth of tibiæ white, tarsi somewhat brownish tinged towards tip; middle tarsi brown like the femora and tibiæ. Posterior tarsi scarcely more than half, middle two-thirds, as long as their tibiæ. Anterior legs missing. *Wings* hyaline, with golden reflections, but less brilliant than in the other species of the genus; a distinct though rather diffused stigma. The wing has the typical cuneiform shape, but there is a slight indication of an anal angle. Base of basal cells at  $\frac{1}{4}$  of wing-length. Mediastinal vein reaching costa much beyond origin of præfurca, about halfway between that and the apex of the first longitudinal vein. Subcostal cross-vein close behind apex of mediastinal vein. Marginal cross-vein and tip of first longitudinal rather indistinct, forming an obtuse angle about the middle of the stigma. Discal cell subquadrate, great cross-vein about  $\frac{1}{3}$  of the way along its lower side. *Halteres* rather long, stalk ochreous brown, knob dark brown. *Abdomen* only slightly constricted at base, brown, apical segments ochreous, venter ochreous.

Length of body 4.5 mm.; wing 5 mm.

This species must apparently come in the genus *Thryptomyia*, though like *T. saltens* it shows considerable divergence from the type, notably in the long mediastinal vein, the less elongated wings, and the less constricted abdomen. Unfortunately we have no male.

*Hab.* Dondra, 3. xii. 1907, 1 ♀ (*T. Bainbrigge Fletcher*).

### 3. *Geranomyia fletcheri*, sp. n., ♀.

Fusca, alis unicoloris subfuscis, rostro thorace vix longiore.

*Head* including rostrum and antennæ dark brownish black. Antennal joints cylindrical,  $1\frac{1}{2}$  times as long as broad. Rostrum slightly longer than thorax; palpi apparently two-jointed, placed just before middle of rostrum. *Thorax* dark brownish black, with a small ochreous-brown spot on each

side on the front margin of the mesonotum, and another above and behind the insertion of the wings. *Legs* dark brown, coxæ ochreous brown, femora somewhat lighter towards base. *Wings* uniformly fuscous-tinged, unspotted except for the stigma and a faint brown cloud at the base of the præfurca. Mediastinal vein reaching costa considerably beyond origin of præfurca, subcostal cross-vein near its tip. Marginal cross-vein nearly three times as long as the up-turned tip of the first longitudinal, with which it is nearly in a line. Second posterior cell with a rectangular base; third longer than second, its upper margin rounded towards the base. Great cross-vein at or just before the base of the discal cell. *Halteres* with the knob brown, the stem ochreous. *Abdomen* dark fuscous.

Length of body 5 mm. (excluding rostrum) : wing 6 mm.

*Hab.* Madulsima, 21. xii. 1907 (2 ♀), 19. v. 1908 (type ♀) (*T. Bainbrigge Fletcher*).

4. *Libnotes pæciloptera*, O.-S. Ann. Mus. Civ. Genova, xvi. p. 403.

Pundaluoya (*E. E. Green*).

#### 5. *Teucholabis cyanea*, sp. n.

Cyanea, abdomine purpureo-cyaneo; pedibus luteis, femoribus apice nigris incrassatis; alis fasciis 4 fuscis.

*Head* shining dark purple, almost metallic, slightly hairy on vertex. Antennæ with the scape ochreous, the flagellum fuscous, clothed with a rather dense pubescence; joints ovate-cylindrical, about twice as long as broad. *Thorax* shining blue-black, submetallic; mesopleuræ dull whitish. *Legs*: coxæ, trochanters, and basal  $\frac{3}{5}$  of femora ochreous, apical fourth of femora brownish or purplish black, preceded by a pale ochreous ring; the apices of all the femora are thickened, those of the hind legs to the greatest extent. Tibiæ and tarsi of the fore and mid legs greyish ochreous, darker towards the tips. Hind tibiæ with the basal two-thirds ochreous, apical third blackish and somewhat thickened. Hind tarsi blackish except for basal half of metatarsus, which is ochreous. *Wings* hyaline, iridescent, with four brown cross-bands, which are darker towards the costa: the first of these is at the base of the basal cells, the second is mainly before, but includes the origin of the præfurca; the first extends only halfway across the wing and is connected with the second by a longitudinal brown patch occupying

the space between the fifth and seventh veins; the third and broadest band includes the cross-veins, lying mainly beyond them, it is broadest in the middle of the wings and extends to the apex of the discal cell; the fourth band occupies the whole of the apex of the wing. The præfurca arises about the middle of the wing, and is obtusely angulated near its base. Marginal cross-vein considerably beyond the fork of the radial vein and near the termination of the subcostal. Small cross-vein almost in a line with base of submarginal cell, situated at the base of the discal cell. First posterior cell very slightly contracted at apex. Discal cell very narrow, tapering almost to a point at the base. Sixth vein slightly sinuous. Wing-margin indented at the terminations of the sixth and seventh longitudinal veins. Great cross-vein a little beyond the base of the discal cell. *Halteres* black, apical half of knob white. *Abdomen* with the first segment and the base and sides of the second shining blue-black, the remainder of the dorsum purplish brown, somewhat shining; venter brown.

Length of body 3.5 mm.; wing 4 mm.

The uniform blue-black colour of the dorsum of the thorax will distinguish this species from any other in the genus. It is the smallest species, except for *T. polita*.

*Hab.* Madulima, 19. v. 1908, 1 ♂ (*T. Bainbrigge Fletcher*); Bentota, 13. vi. 1890, 1 ♀ (*Lt.-Col. Yerbury*).

#### 6. *Styrgomyia ceylonica*, sp. n., ♂.

Griseo-ochracea, pedibus annulatis, antennarum art. 2 nigro, thorace vittis 2 anterioris nigro-fuscis; alis nigro-punctatis, apicis venarum pallide infuscatis.

*Head* greyish ochreous, with black bristles; tips of palpal and first antennal joints darker; second antennal joint entirely black. *Thorax*: *prothorax* dark brown at the sides, greyish ochreous in the middle, with a dark median line posteriorly; a tuft of black bristles on each side in front. *Mesonotum* with the ground-colour cinereous above, ochreous at the sides; two distinct blackish-brown bands, closely approximated in front, somewhat divaricated behind, continued as far back as the suture as narrower and lighter bands; outside these on each side is a narrow, indistinct brown band, starting from a small pale ochreous depression near the front margin; behind the suture are two brown spots; two distinct rows (one on each side of the median line) of black bristles. *Scutellum* greyish ochreous, with two black bristles. *Metanotum* dark brown. *Pleurae* greyish



ochreous. *Legs* greyish ochreous; all the femora with two complete brown rings, on the front pair at  $\frac{3}{5}$  and  $\frac{4}{5}$ , on the middle pair at  $\frac{3}{5}$  and  $\frac{3}{4}$ , and on the hind pair at  $\frac{1}{2}$  and  $\frac{3}{4}$  of the distance from base to apex of femora; knees narrowly brown; tibiæ with the apex dark brown, middle tibiæ with a distinct brown spot in the middle of the upper side (this is only faintly visible on the other legs); tarsi light greyish ochreous, tips of first four joints light brown, whole of last joint blackish. *Wings* subhyaline, ochreous-tinged; distinct blackish spots on the small cross-vein, the two outer angles of the discal cell, the junction of the great cross-vein with the fifth longitudinal, and before the apex of the seventh; terminations of all the veins slightly clouded with fuscous. Great cross-vein just before middle of discal cell. Seventh vein with its tip bent downwards at right angles to the main portion, a stump arising from the angle, which is nearly as long as the terminal portion of the vein. *Halteres* uniformly ochreous. *Abdomen* dark greyish ochreous, all the segments with narrow brown apical bands. There is a continuous median longitudinal brown band, which looks as though it were due to the presence of food in the gut. *Genitalia* with the upper lobes longer than the lower.

Length of body 6 mm.; wing 4.5 mm.

*Hab.* Weligama, 9. ii. 1908, 1 ♂ (*T. Bainbrigge Fletcher*).

7. *Trentepohlia trentepohlî*, Wied. Ausserour zweifl. Ins. i. 551. 18.

Weligama; Galle (*T. Bainbrigge Fletcher*); Tanglejani (*Lt.-Col. Yerbury*).

8. *Trentepohlia (Mongoma) pennipes*, O.-S. Berl. ent. Z. 1887, p. 204.

Trincomali (*Lt.-Col. Yerbury*); Pundaluoya (*E. E. Green*).

Although Bigot, in 1854, gave no satisfactory definition of *Trentepohlia*, he clearly indicated the type as *Limnobia trentepohlî*, Wied., and consequently his name cannot be rejected. *Mongoma*, Westw., was not published until 1881, but it will be useful to retain this latter name as a subgenus, including those species with four posterior cells, *Trentepohlia* in this restricted sense having only three. The two sections are closely allied, and no doubt are best included under one genus. I have compared balsam preparations of the genitalia of these two Ceylon species, and they are very

similar indeed. *T. pennipes*, O.-S., is said to have two spines near the base of the front femora; specimens which I have examined from the Seychelles Is. show two long and three or four short spines or bristles in this position. *T. exornata*, Bergr., and a closely allied species from W. Africa, have about eight small short spines on the underside of the front femora near the base. This, again, indicates that we are here dealing with only one genus. There are several undescribed African species of this genus in the British Museum.

9. *Conosia irrorata*, Wied. Aussercur. zweifl. Ins. i. 574. 3.

Dondra; Galle; Bentota (*T. B. Fletcher*).

10. *Eriocera crystalloptera*, O.-S. Berl. ent. Z. 1887, p. 222.

Madulsima (*T. B. Fletcher*); Pundaluoya (*E. E. Green*); Haputale (*Lt.-Col. Yerbury*).

The female is larger than the male, but otherwise very similar.

11. *Eriocera humberti*, O.-S. Berl. ent. Z. 1887, p. 221.

Pundaluoya (*E. E. Green*), 2 ♀.

A specimen without an abdomen from Uva P. Madulsima (*T. B. Fletcher*) has the thorax entirely velvet-black, but otherwise agrees with *E. humberti*, of which it may be the undescribed male.

12. *Eriocera ctenophoroides*, sp. n., ♂ ♀.

Rufa, abdomine nigro nitido; pedibus brunneis; alis fuscis, maculis tribus albis apicalibus.

*Head* black, with a black pubescence. *Antennæ* 8-jointed in both sexes, but the last four joints indistinctly separated; scape dark fuscous, flagellum ochreous brown. *Palpi* blackish. *Thorax* entirely brick-red, velvety in appearance, except for a line round and just below the mesonotum, which is shining and translucent. *Post-alar calli* and *protuberance* below root of wing with tufts of black hairs. *Legs* uniformly dark brown, except for the red coxæ; densely covered with somewhat accumbent black pubescence; stout and shorter than usual in *Eriocera*, giving the insect a very *Ctenophora*-like appearance, which is heightened by the form and colour of the abdomen. *Wings* dark brown, lighter towards the anal margin and in the centre of some

of the cells; a small, long and narrow, more or less crescent-shaped spot in the outer marginal cell, a very small triangular spot in the first submarginal, and a large semicircular spot in the outer portion of the second submarginal and first posterior, white, all reaching the wing-margin.

There are some very interesting features in the neuration: the uppermost of the three veins proceeding from the discal cell is curved downwards, in the type male to such an extent that the second posterior cell is completely closed at its apex; in the type female the small cross-vein is absent, the first basal cell being open. I have not met with either of these variations in any other Tipulid. *Halteres* brown, knob somewhat darker, stalk hairy. *Abdomen* deep black, except the first segment and the ovipositor, which are reddish; for the most part brilliantly shining, but there are apical velvety bands on segments 2-6, these are broadest on segments 2-4, and broader in the female than in the male. Venter entirely dull. The abdomen is much broader in the middle.

*Variety.* One female has the thorax entirely velvet-black and the legs darker.

Length of body 16 mm. (without ovipositor); wing 15 mm.; legs 27-28 mm.

This species is allied to *E. selene*, O.-S., and *E. albonotata*, Lw. From the former it differs in its larger size and in the absence of the central lunule of the wings.

*Hab.* Kandy, 19. v. 92 (type ♂); Kottawa, 24. iv. 92 (type ♀); Pallamadulla, 17. vi. 92 (1 ♀) (*Lt.-Col. Yerbury*).

13. *Eriocera albonotata*, Lw. Ber. d. Berlin. Akad. p. 658 (as *Limnobia*).

Kandy; Pallamadulla; Passara; Trincomali (*Lt.-Col. Yerbury*); Pundaluoya (*E. E. Green*); Diajatalawa (*T. B. Fletcher*).

This species apparently has its nearest ally in the preceding, the wing-markings of some specimens being identical. It seems to be very common and very variable. In one variety the abdomen is entirely dark; in another there are no dark tips to the tibiæ. The thorax and the last three abdominal segments are sometimes black, sometimes brown, and the white spots at the tip of the wings are in one form very much smaller.

14. *Eriocera scutellata*, sp. n., ♂ ♀.

Flava, thoraco nigro trivittato, scutello flavo, alis brunneis non maculatis; fronte bituberculata.

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*Head* orange, darker brown behind the eyes, dark-haired. Front with two prominent tubercles. Scape of antennæ dark brown; flagellum ochreous, blackish towards the tip. *Thorax* ferruginous orange; mesonotum with three longitudinal black-brown stripes; the median one is narrowed behind and extends almost back to the suture, where it is seen to be double; the lateral stripes broaden out behind the suture and extend as far as the scutellum. Scutellum orange-yellow. Metanotum dark brown. *Legs*: femora ochreous with blackish tips; tibiæ and tarsi blackish, tibiæ more ochreous towards the base. *Wings* a uniform ochreous brown. In the female the discal cell of one wing is open. *Halteres* brownish. *Abdomen* in male deep orange, first segment brown, segments 2-4 with black lateral borders, segments 5-7 all black except for a narrow apical orange border; in female lighter orange with a black lateral line.

Length of body, ♂ 18 mm., ♀ 15 mm.; wing, ♂ 24 mm., ♀ 16 mm.

*Hab.* Pundalnoya, 1 ♂, Sept. 1892, and 1 ♀, Oct. 1897 (*E. E. Green*).

There is little doubt that the two specimens belong to the same species, though they differ in the colour of the abdomen and the length of the wing.

#### 15. *Eriocera tuberculifera*, sp. n.

Lutea, thorace antice flavo, postice fusco; alis brunneis non maculatis; pedibus luteis; fronte trituberculata.

*Head* orange-yellow. Front with a pair of very prominent tubercles just above the antennæ, and above these with a smaller median tubercle. Antennæ with the basal half ochreous yellow, the apical half dark fuscous. *Thorax* fuscous brown; mesonotum yellow in front, the yellow colour not extending as far back as the suture. *Legs* uniform ochreous. *Wings* uniform ochreous brown, very like those of the preceding species. *Halteres* dark fuscous. *Abdomen* orange ochreous, with a dark lateral line.

Length of body 14-17 mm. (without ovipositor); wing 14-17 mm.

*Hab.* Pundalnoya, type ♀, Nov. 1888, one other ♀, July 1889 (*E. E. Green*).

#### 16. *Eriocera fusca*, sp. n.

Fusca, pedibus subcyanicis, alis non maculatis.

Head, thorax, and abdomen nearly uniform dingy fuscous.

Front rather produced, but not bituberculated. *Legs* dark fuscous, with submetallic bluish reflections in some lights. *Wings* uniform fuscous. Neuration, as usual in this genus, is rather variable: in the type male there is a supernumerary cross-vein in the second posterior cell, which in the right wing is bifurcated, so that the left wing has two discal cells and the right wing three. The antennæ are tinged with ochreous, and there are indications of two paler stripes on the thorax alternating with three dark ones.

Length of body 10-13 mm.; wing 8-11 mm.

*Hab.* Pundaluoya, April 1889, type ♂ and ♀ and two other males (*E. E. Green*).

This species seems to be most closely allied to *E. morosa*, O.-S., from which it differs (judging from Osten-Sacken's description) in the less intense black colour, in the bluish reflections on the legs, and in the shape of the discal cell; the third posterior cell is here, as usual, longer than the second.

X.—On the *Culicid* Genus *Eretmapodites*, *Theobald*.  
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THE object of this paper is to clear up certain points of synonymy in the genus *Eretmapodites* without entering into any discussion of the generic position. The species certainly form a well-marked group, and can be treated of as such, whether or not the group be worthy of generic rank. I may, however, point out that there is very little to separate this genus from *Desvoidya*.

A certain amount of confusion appears to have arisen between the two species described by Mr. Theobald, *E. quinquevittatus* (Mon. Culicid. i. p. 280, 1901) and *E. austenii* (Mon. Culicid. v. p. 572, 1910). Mr. E. E. Austen, of the British Museum, had placed the following note under the series of *E. quinquevittatus* :—

“N.B.—It appears to me that the four specimens from Wilberforce, Freetown (E. E. Austen), in the top row above are *specifically distinct* from the three from the same locality in the next row. The latter belong to the following species [*E. austenii*], which is distinguished by the marking of the dorsum of the thorax,